CITY OF TORONTO
DEPARTMENT OF PUBLIC HEALTH

METROPOLITAN
TORONTO
CENTRAL
LIBRARY
Municipal Reference

# SOUTH RIVERDALE BLOOD LEAD TESTING - 1983

PREPARED BY:

Edward Ellis, M.D., M.P.H., F.R.C.P.(C)
Jean Erb, M.D. D.P.H.
Gregory McFarlane, M.S.W.

March 1984

TABLE OF CONTENTS


| | PAGE |
|---|---|
| SUMMARY | 1 |
| BACKGROUND | 1 |
| METHODOLOGY | 2 |
| (1) Designation of High Risk Areas | 2 |
| (2) Planning [illegible] Implementation of "Under [illegible]ead Testing Clinics | 3 |
| RESULTS | 4 |
| (1) Response Rate | 4 |
| (2) Testing Sites | 4 |
| (3) Screened Blood Lead Levels | 5 |
| (a) Sex | 5 |
| (b) Age | 6 |
| (4) Blood Lead Values :20 ug/dl (0.97 umol/l) | 11 |
| (5) Follow-up of Children with Blood Lead :20 ug/dl (0.97 umol/l) | 11 |
| DISCUSSION | 13 |
| (1) Response Rate | 13 |
| (2) Laboratory Analysis of Blood Lead | 13 |
| (3) Sample Bias | 14 |
| (4) Choice of Blood Lead Test rather than Erythrocyte Protoporphyrin | 14 |
| (5) The Cost of the Lead Testing Clinics | 15 |
| (6) Proposals for Blood Lead Testing 1984 | 15 |
| RECOMMENDATION | 18 |
| REFERENCES | 19 |

APPENDICES

I Designated High Risk Area for Children under 6 years

II Flyer Advertising 1983 Blood Lead Screening

SUMMARY

Following the 1982 mass lead screening in South Riverdale, the Ministry of the Environment produced an isopleth indicating an area where soil lead levels were found greater than 1,000 p.p.m. This area - roughly south of Queen Street East between Booth and Laing Avenues - was designated as high risk for children under six years of age. In the fall of 1983 "Under Six" lead testing clinics were held at three schools - Morse, St. Joseph's and Bruce - and at Woodgreen Day Care Centre for children living in the designated area.

A total of 70 children under six years were tested, or 15.2% of the estimated population (460). The average blood lead was 15.8 ug/dl (0.76 umol/l) compared with 14.2 ug/dl (0.69 umol/l) for 135 children under six years living in the designated area and tested in 1982.

18.6% (13 children) had blood lead levels of 20 ug/dl (0.97 umol/l) or more compared to 13.3% in 1982 (NS, $p>.05$). This may be because the provincial laboratory, where the blood analysis was done in 1983, uses a method which gives slightly higher results than the ESA Laboratory in Massachusetts, used in 1982. For screening, this increased sensitivity is good, but true comparisons are not possible for the two years.

Girls had a higher blood lead (16.2 ug/dl or 0.78 umol/l) than boys (15.7 ug/dl or 0.74 umol/l). Five-year olds had the highest of all the ages (16.9 ug/dl or 0.82 umol/l). These findings are the reverse of last year and this points out that the samples tested in 1982 and 1983 may be biased and not necessarily representative of the children in the area.

Home visits were made by public health nurses and inspectors to the homes of children with blood lead of 20 ug/dl or over in order to help identify any sources of lead and reduce exposure. No child had a blood lead of 30 ug/dl or more (which would require further investigation).

Next year a South Riverdale Street Health Fair is proposed with an aim to test over 80% of the children under six years in the designated area. Testing will be done in a motorized van and combined with preschool health education on minimizing exposure to lead, nutrition related to lead, and dental health.

BACKGROUND

On April 12, 1983 the Local Board of Health considered the report (March 3, 1983) from the Medical Officer of Health respecting Lead Week - October 4-8, 1982 and adopted the recommendations.(1)

Recommendation 7 stated "That the Department designate areas with soil lead greater than 1,000 p.p.m. as high risk for children aged 0 - 5".

Recommendation 8 stated "That the Department advise householders within known designated areas to have their children aged 0 - 5 years tested annually for free erythrocyte protoporphyrin and for blood lead as appropriate."

METHODOLOGY

(1) Designation of High Risk Areas

As part of our 1982 mass screening programme and in compliance with our recommendations, the Ministry of the Environment (MOE) conducted soil lead sampling:

(a) at 11 school sites within 1,000 metres of Canada Metal Company (CMC);

(b) at all playground sites in the Eastern Health Area (EHA);

(c) at the homes of various children aged 0 - 5 with blood lead levels of 20 ug/dl (0.97 umol/l) or more.

The MOE provided a map with a soil lead 1,000 p.p.m. concentration isopleth centred around CMC (Appendix I). This was constructed by computer from the results of surface soil sampling 1974 - 1983. It was observed that this isopleth differed only slightly from an earlier one constructed in 1974 - 1976 before soil replacement.

Based on this isopleth, an area was outlined with the following approximate boundaries: on the east, Laing Avenue; on the south, the Gardiner Expressway; on the west, Booth Avenue up to Eastern Avenue and then Morse Street up to Queen Street; on the north, Queen Street over to Jones Avenue and then a small section north of Queen Street as far as Laing Avenue.

This was designated as a high risk area for children 0 - 5 years, because the soil lead concentration was frequently over 1,000 p.p.m.

(2) Planning and Implementation of "Under 6" Lead Testing Clinics

Representatives from South Riverdale Community Health Centre's Environmental Health Committee met with Departmental staff to plan the clinics. These were to be held for the public, by telephone appointment, in Morse Public School on October 4, 5, and 12th, 1983. It was decided that "drop ins" to the clinics would also be accommodated.

Arrangements were made to test children who lived in the high risk area and attended the kindergartens at St. Joseph's Separate School, Bruce Public School, Morse Public School and Woodgreen Day Care Centre, at these sites.

During the week prior to the clinics, notices (Appendix II) were delivered by hand courier to all the residences in the high risk area, and community volunteers did a house-to-house canvas of the neighbourhood, distributing notices and pamphlets.

Parents who chose to attend their own physician rather than our clinic were encouraged to request that a report of the results be sent to us. A report form was printed on the reverse side of the notices. In addition, physicians in the Eastern Health Area were informed of our lead screening programme by letter in early September, 1983. Clinics were staffed by nurses, a physician, and clerks from the Eastern Health Area. Educational material about lead was available at the clinics.

The capillary blood specimens were sent to the provincial laboratory for lead analysis. Results were reported in S.I. units (umol/l) and these were converted to metric units (ug/dl) by the computer.

The parents were notified by letter of the results. Visits were made to the homes of children with blood lead levels of 20 ug/dl (0.97 umol/l) or over by public health nurses and inspectors to identify possible sources of lead and to advise on means of reducing exposure.

Analysis of the data was done by the EHA data analyst. Using 1981 census data, an estimate of the number of children aged 0 - 5 years living in the designated area was calculated. 1982 and 1983 results from this target group were compared.

RESULTS

(1) Response Rate

The response rate was less than in 1982 with males and females equally represented in both years.

Table I - Response Rate 1983 Compared with 1982

| | Estimated Target Pop. 0 - 5 years | 1982 Number Tested | 1982 % of Target | 1983 Number Tested | 1983 % of Target |
|---|---|---|---|---|---|
| Total | 460 | 135 | (29.3) | 70 | (15.2) |
| Male | 235 | 67 | (28.5) | 36 | (15.3) |
| Female | 225 | 68 | (30.0) | 34 | (15.1) |

(2) Testing Sites

Most children (49) were tested either in the school where they attended kindergarten or in their daycare centre. Only 11 children were tested through telephone appointments and the remaining 9 children were "drop-ins". Three other children were reported to have attended their private physician, but testing was not done for 2, since they had only moved to the high risk area in that month.

Table II - Number Screened by Test Sites

| Site | Number | (% of Total) |
|---|---|---|
| 3 Morse School Clinics, including kindergarten | 35 | (50.0) |
| Bruce School Kindergarten | 17 | (24.3) |
| St. Joseph's School Kindergarten | 11 | (15.7) |
| Woodgreen Daycare | 6 | ( 8.6) |
| Private Physican reports | 1 | ( 1.4) |
| | 70 | |

(3) Screened Blood Lead Levels

The mean blood lead level for 70 children under six years, living in the high risk area was 15.8 ug/dl (0.76 umol/l) compared with 14.2 ug/dl (0.69 umol/l) for 135 children tested in 1982.

(a) Sex

Females had a higher mean blood lead (16.2 ug/dl or 0.78 umol/l) than males (15.4 ug/dl or 0.74 umol/l). This was reversed from 1982 when the female blood mean was 14.0 ug/dl (0.68 umol/l) and the male was 14.4 ug/dl (0.70 umol/l).

Table III - Distribution of Blood Lead by Sex
Number (Percentage of Row)

| ug/dl (umol/dl | 0 4.9 0-.24 | 5-9.9 .24-.48 | 10-14.9 .48-.72 | 15-19.9 .72-.96 | 20-24.9 .97-1.2 | 25-29.9 1.2-1.4) | Total |
|---|---|---|---|---|---|---|---|
| Male | 0 | 3(8.3) | 14(38.9) | 13(36.1) | 5(13.9) | 1(2.8) | 36 |
| Female | 0 | 2(5.9) | 12(35.3) | 13(38.2) | 5(14.7) | 2(5.9) | 34 |
| All | 0 | 5(7.1) | 26(37.1) | 26(37.1) | 10(14.3) | 3(4.3) | 70 |

See Figure 1.

(b) Age

Screened blood lead levels by age are shown in Table IV.

Table IV - Distribution of Blood Lead by Age
Number (Percentage of Row)

| ug/dl (umol/l | | 0-4.9 0-.24 | 5-9.9 .24-.48 | 10-14.9 .48-.72 | 15-19.9 .72-.96 | 20-24.9 .97-1.2 | 25-29.9 1.2-1.4) | Total |
|---|---|---|---|---|---|---|---|---|
| Age | 1 | 0 | 1( 7.7) | 7(53.8) | 4(30.7) | 1( 7.7) | 0 | 13 |
| in | 2 | 0 | 0 | 2(25) | 6(75) | 0 | 0 | 8 |
| years | 3 | 0 | 1(14.3) | 2(28.6) | 3(42.8) | 1(14.3) | 0 | 7 |
| | 4 | 0 | 2(11.1) | 8(44.4) | 3(16.6) | 4(22.2) | 1(5.6) | 18 |
| | 5 | 0 | 1( 4.2) | 7(29.2) | 10(41.7) | 4(16.7) | 2( 8.3) | 24 |
| Totals | | 0 | 5( 7.1) | 26(37.1) | 26(37.1) | 10(14.3) | 3( 4.3) | 70 |

See Figure 2.

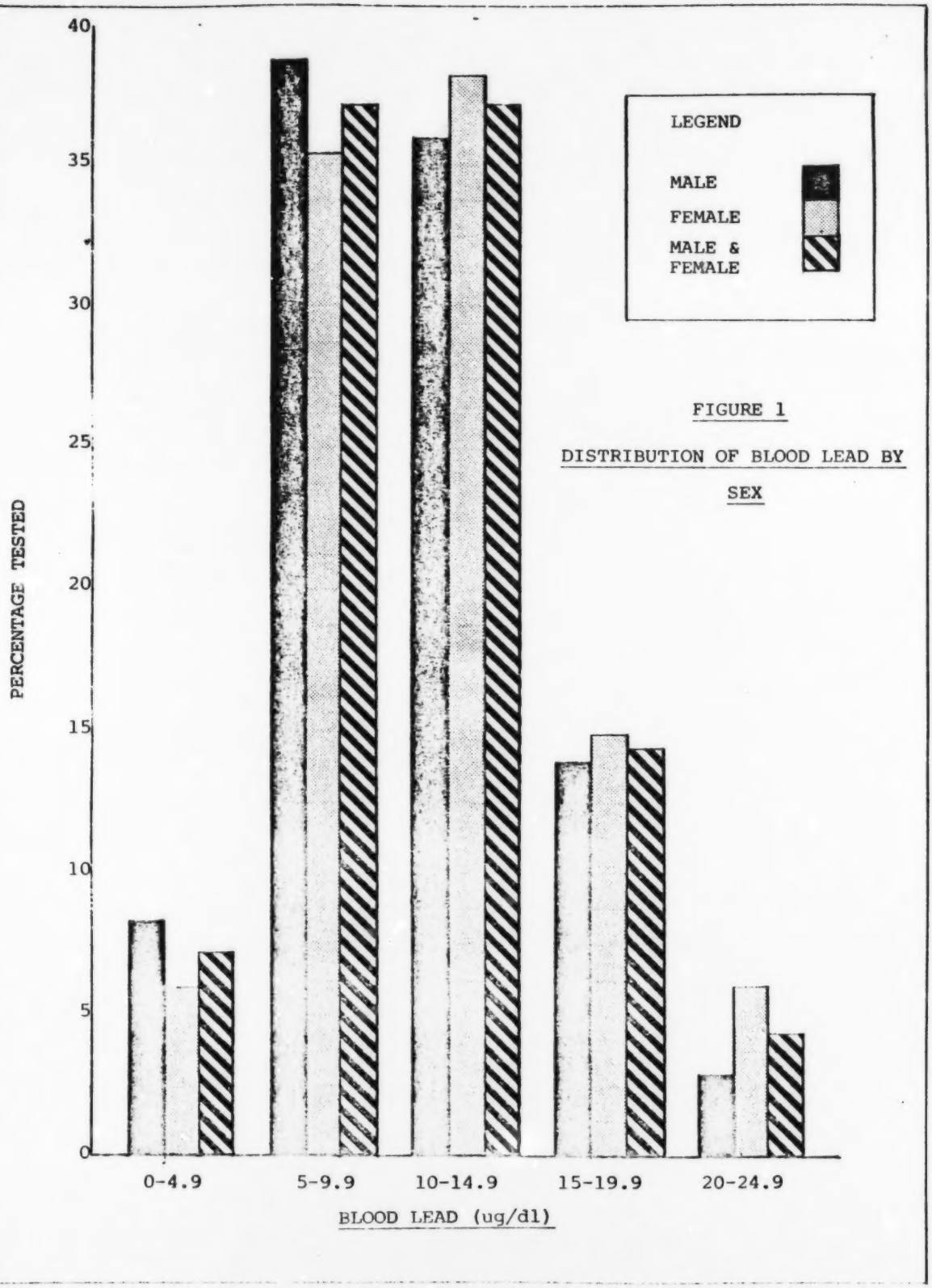



FIGURE 1

DISTRIBUTION OF BLOOD LEAD BY SEX

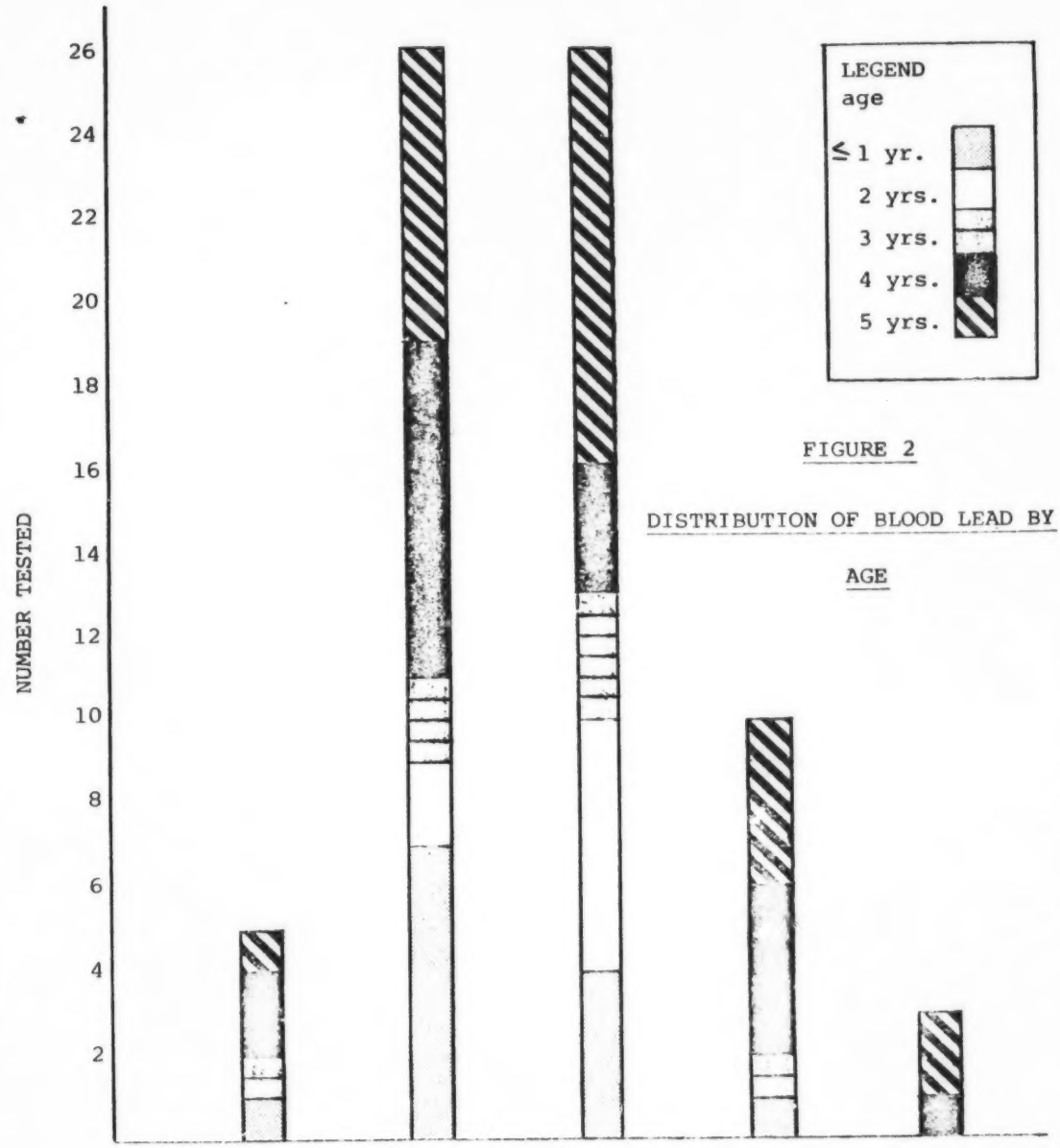



FIGURE 2

DISTRIBUTION OF BLOOD LEAD BY AGE

The least squared means of the blood lead values with the standard errors by age in years is shown in Table V.

Table V - Least Squared Mean Blood Lead by Age

| Age in Years | n | Blood Lead Least Sq. Mean ug/dl | (umol/1) | SE of Mean ug/dl | (umol/1) | p |
|---|---|---|---|---|---|---|
| | | 1982 | | | | |
| 1 | 22 | 13.9 | (0.67) | 1.2 | (0.05) | ) 0.88 |
| 2 | 14 | 12.5 | (0.60) | 1.6 | (0.08) | ) 0.51 |
| 3 | 19 | 15.0 | (0.72) | 1.3 | (0.07) | ) 0.75 |
| 4 | 45 | 15.0 | (0.72) | 0.8 | (0.04) | ) 0.055 |
| 5 | 35 | 13.0 | (0.63) | 1.0 | (0.05) | |
| | | 1983 | | | | |
| 1 | 13 | 14.2 | (0.68) | 1.3 | (0.06) | ) 0.74 |
| 2 | 8 | 14.8 | (0.72) | 1.6 | (0.08) | ) 0.89 |
| 3 | 7 | 15.2 | (0.73) | 1.8 | (0.09) | ) 0.59 |
| 4 | 18 | 16.3 | (0.79) | 1.1 | (0.05) | ) 0.67 |
| 5 | 24 | 16.9 | (0.82) | 1.0 | (0.05) | |

See Figure 3.

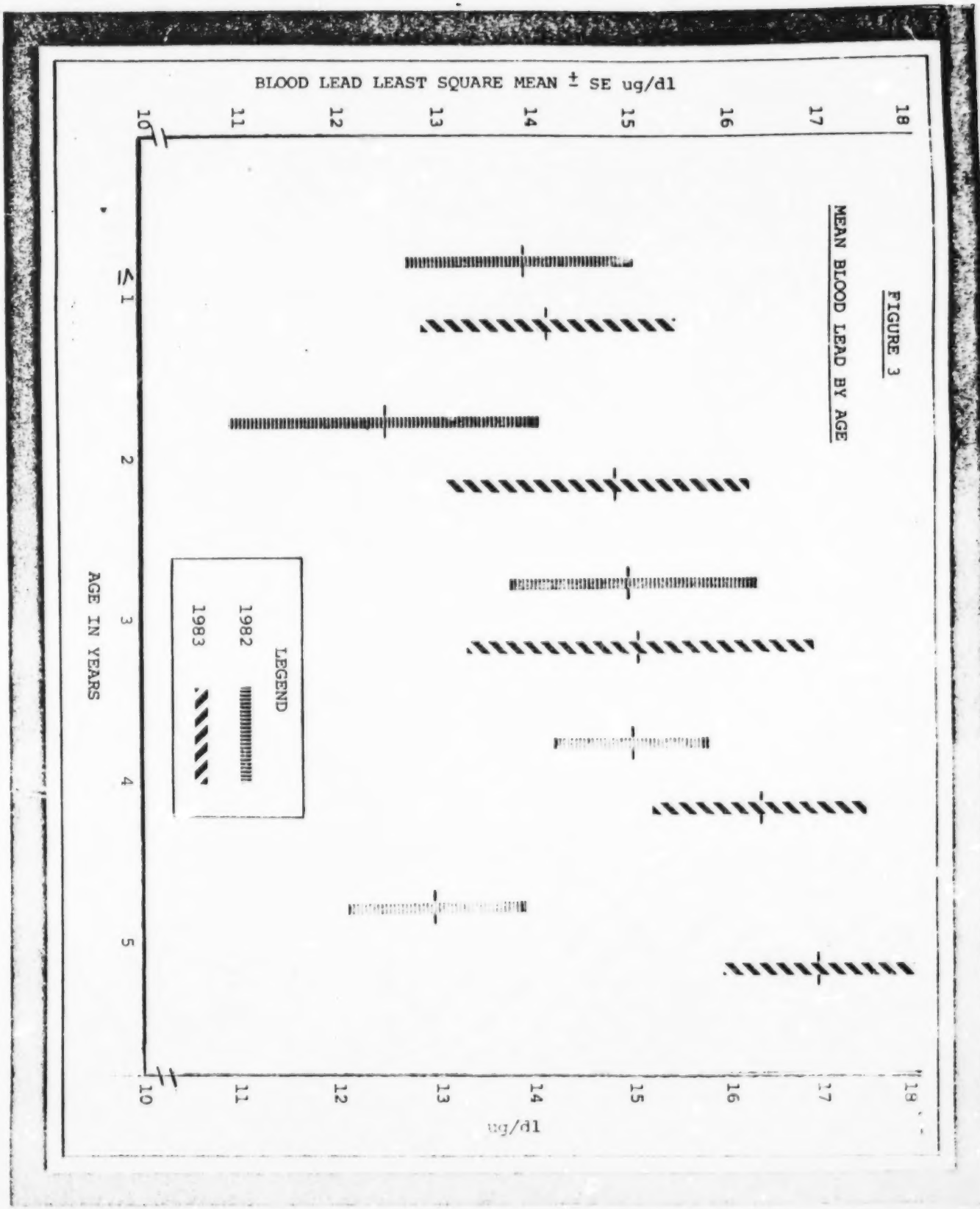



FIGURE 3

MEAN BLOOD LEAD BY AGE

(4) Blood Lead Values ≥20 ug/dl (0.97 umol/l)

The proportion of children with blood leads ≥20 ug/dl (0.97 umol/l) was not significantly higher in 1983 than in 1982:

| | | | |
|---|---|---|---|
| 1982 | 18/135 | (13.3%) | |
| | | | p>.05 X = 0.62 1 df |
| 1983 | 13/70 | (18.6%) | |

In 1983, no children in the target area were found to have screening levels equal to or greater than 30 ug/dl (1.4 umol/l) - the level at which further testing is required. One child in 1982 had a screening blood lead ≥30 ug/dl (1.4 umol/l) but that was not confirmed on further testing a month later.

(5) Follow up of Children with Blood Lead ≥20 ug/dl (0.97 umol/l)

A public health nurse and inspector visited the homes of these children. Two girls, aged 5 and under 1, had moved out of the area. The remaining 11 children had lived in the area an average of 4 years (range: 1 - 6 years).

Schools attended: Bruce: 6; Morse: 3; St. Joseph's: 2

Age: 4 years: 7; 5 years: 4

| | Yes | No |
|---|---|---|
| Lead worker in home | 1 * | 10 |
| History of anaemia | 1 | 10 |
| History of pica | 0 | 11 |
| House dusty | 7 | 4 |
| Bare soil in play area | 5 | 6 ** |
| Flaking paint or plaster | 6 | 5 |
| Recent renovation | 6 | 5 |
| Used lead containing insecticides | 0 | 11 |
| Fruit juice stored in pottery or soldered tins | 2 | 9 |
| Used water boiled in tea kettles | 2 *** | 9 |
| Lead pipes | 2 | 9 |
| Vegetables grown and eaten (only one grew root vegetables) | 4 | 7 |
| Were tested in 1982 | 2 **** | 9 |

* scrap dealer who stored batteries in basement

** one home had soil replaced in the front and back yards in 1978 because of high lead content and the backyard was cemented in 1983

*** recent models meeting Canadian Safety Association standards

**** a four-year old male child with a 1983 value of 23.4 ug/dl (1.14 umol/l) had a 1982 value of 22 ug/dl (1.06 umol/l)

a five year old female child with a 1983 value of 22 ug/dl (1.06 umol/l) had a 1982 value of 16.5 ug/dl (0.80 umol/l)

DISCUSSION

(1) Response Rate

The data on the target population is crude, based on estimates from the 1981 census. This needs improvement if we are to do an adequate evaluation of this programme. A possible method would be a door to door canvas by community volunteers, together with a promotional campaign.

The greater response rate in 1982 may be explained by the better publicity with the mass community screening programme, posters in public places, and offering balloons.

However, the proportion of participating children to the total population at risk was poor in both years, and the results cannot be considered to be representative of the children in the high risk area.

A better response rate is essential if we are to offer an effective service. A possible way of increasing participation might be a Street Health Fair taking the service to the people.

(2) Laboratory Analysis of Blood Lead

The blood lead means were generally higher this year than last year. This can be explained in some part by our change in laboratories. In 1982 the blood specimens were flown to the ESA laboratory in Massachusetts, USA - a laboratory of established reliability. Their method of blood lead analysis was by anodic stripping voltometry.

In 1983, the provincial laboratory was selected for several reasons: ease of transportation, no customs declaration, no U.S. dollar exchange, and therefore less costly. The Province had installed new equipment to do lead analysis by atomic spectometry, known to give somewhat higher results (2). This increased sensitivity is an asset to a screening programme but creates problems when comparing with results obtained by another method. The difference in laboratory analysis was probably responsible for the higher results in 1983 than in 1982 for the two children mentioned above in the results of the follow-up.

A small comparative study was undertaken. Duplicate samples of capillary blood from 25 individuals (mostly staff of our Department) were sent to the Provincial Laboratory and to the ESA laboratory. There was a correlation coefficient of 0.67

between the blood lead means from the two laboratories. This was significant at $p<.01$.

(3) Sample Bias

The reversed male/female mean blood levels are probably best explained by sample bias, as the children tested were not randomly selected.

This is also the most likely explanation for the difference in 5-year old's mean blood lead levels - 13.0 ug/dl (0.63 umol/l) in 1982 compared to 16.9 ug/dl (0.82 umol/l) in 1983. (Figure 3).

(4) Choice of Blood Lead Test rather than Erythrocyte Protoporphyrin

The erythrocyte protoporphyrin (EP) test has been recommended as a method of screening for lead. (1,3,4), as it measures an adverse metabolic effect on the synthesis of heme and therefore reflects the total body burden of lead.

An advantage of the EP test is that it is unaffected by contamination with extraneous lead and does not show wide fluctuations due to sporadic exposure to lead (3).

Roels, in a study of children living near a smelter compared with controls living further away, found that the EP response was only valid for blood levels of 20 ug/dl (0.97 umol/l) or over (5). Most of our blood lead values were under 20 ug/dl.

Peters states the lead - EP correlation may be particularly lacking in young children. Since it is especially important to detect potential hazards of undue lead absorption in children as soon as possible, blood lead measurements are preferred to blood EP measurements in this situation (6).

Doing both lead and EP tests would double the cost of the laboratory analysis. On balance it was decided that the more efficient test for this programme was the blood lead.

(5) The Cost of the Lead Testing Clinics

| | |
|---|---|
| Clinic staff cost: | $2,344.17 |
| 70 lead tests at $6.50 | $ 455.00 |
| | $2,799.17 or $40 per child tested. |

This is approximately the same as the cost for this service through a private doctor and laboratory, covered by OHIP.

Additional costs for the program include pamphlets and leaflets, cost of follow-up visits, planning, data analysis and preparing the report as well as the time of friends of South Riverdale Community Health Centre (volunteered) for promotion. Such costs would occur regardless of lead testing by Department clinic or by private doctor.

(6) Proposals for Blood Lead Testing 1984

To make this programme more effective, we must reach a higher percentage of children under 6 years of age in the designated area.

We have three possible alternatives to consider:

(a) Deliver flyers to all homes in the designated area, advising parents to take their children under six years of age to their private physician for testing. Expected results from this would be poor, since only three children were reported last year to have visited their own doctor, with only one actually being tested.

(b) Deliver flyers to all homes in the designated area and, similar to last year, provide clinics in the local schools and day care centres. Parents may drop in with infants and preschoolers to the local school clinic. The expected results would be similar to 1983 - unsatisfactory.

(c) Conduct a South Riverdale Street Health Fair in collaboration with various community groups.

Objectives:

1. To screen over 80% of the children under 6 years of age living in the designated area for blood lead.

2. To present a preschooler health education programme directed at the children and their parents on lead, nutrition especially as related to lead, and dental health.

Method:

A mobile van with clown, Tooth Fairy and balloons would park at various strategic points in the designated area during the week of September 17, 1984 in the early evening, 6:00 p.m. - 8:30 p.m. and on Saturday, September 21, 1984, 10:00 a.m. - 3:00 p.m. September 23 - 24 evenings would be alternate sessions in case of rain.

Promotion:

Prior to the fair, community volunteers would deliver flyers to homes in the designated area and conduct a "number census" of children under 6 years.

During the fair, volunteers with flyers would knock on doors and "round up" children for testing in the van. Chinese speaking volunteers would assist in some neighbourhoods as required.

Health Education:

Information regarding lead would be available and distributed. Teaching about the importance of handwashing for children and the control of household dust would be highlighted.

The nutrition component would emphasize the need for an adequate diet with special attention to iron and calcium and their influence on lead levels. A dental health education programme (Tooth Fairy, dental screening, toothbrush exchange) aimed at preschoolers and their parents would be given by a dental hygienist and assistant.

Blood Lead Testing:

Finger prick tests would be done in the van by 2 registered nurses or one nurse with a trained laboratory technician. A public health nurse would coordinate the clinic supplies and the specimens to be sent to the provincial laboratory. As well, some pick-up tests may be planned in the schools.

Responsibilities:

A planning committee with representation from South Riverdale Community Health Centre's Environmental Health Committee, Woodgreen Community Centre, the Community Police from 55 Division and Departmental staff would be responsible for the planning and promotion of the fair. Community service clubs are being contacted for their support.

Evaluation, data analysis and preparation of the report would be done by EHA staff in consultation with community representatives.

Flyers and pamphlets would be supplied by Eastern Health Area.

EHA staff for the fair would include a registered nurse, dental hygienist, dental assistant and clerk/driver. They would receive lieu time for their services.

Costs:

Additional costs for this proposed fair can be absorbed by the EHA budget.

Estimated costs in excess of alternative proposals (a) or (b):

| | |
|---|---|
| Motor Home Van, including insurance & gas (possibly contributed by a community organization) | $785.00 |
| 1 RN for 25 hours, @ $13.98/hour (or trained Laboratory Technician on a contract basis) | $349.50 |
| Honorarium for clown (25 X $5.00) | $125.00 |
| 500 balloons and helium | $169.00 |
| 250 lead tests @ $3.89 each (in addition to 125 tests prepaid last year) | $972.50 |
| TOTAL: | $2,401.00 |

RECOMMENDATION:

That the Local Board of Health approve of a South Riverdale Street Health Fair in September 1984 for our lead testing programme of children under 6 years of age in the designated area.

ACKNOWLEDGEMENTS:

We wish to express our appreciation to the Provincial Public Health Laboratory, the Ministry of the Environment, South Riverdale Community Health Centre's Environmental Health Committee, and the staff of the Eastern Health Area during testing and follow-up. Special thanks are due to Lannie Messervey, for her willing secretarial assistance and to John Burnett for graphics.

REFERENCES

1. City of Toronto Department of Public Health, Report on Lead Week - October 4 - 8, 1982, the Local Board of Health, March 3, 1983.

2. Centre du Toxicologie de Quebec "Interlaboratory Comparison Program Newsletter", Le Centre Hospitalier de l'Universite Laval, Quebec, Canada, January 24, 1983 (Mimeographed).

3. Center for Disease Control, Preventing Lead Poisoning in Young Children, Atlanta, Georgia: U.S. Department of Health, Education and Welfare, Public Health Service, Center for Disease Control, 1978.

4. Stopps, G.J. and Pauker, J. Report on Health Effects of Low Lead Level Exposure with Special Reference to Certain Areas of Toronto, the Local Board of Health, July 1981.

5. Roels, H.A.; Bucket,J.P: Loweys, R.R. et al, "Impact of Air Pollution" Archives of Environmental Health 31 (1976) 310-316.

6. Peters, F. and Bourdeau, J. "Screening for Undue Lead Absorption Correlation between Lead and Erythrocyte Protoporphyrin." Canadian Journal of Public Health, 24 (1983), 356-.

APPENDIX I

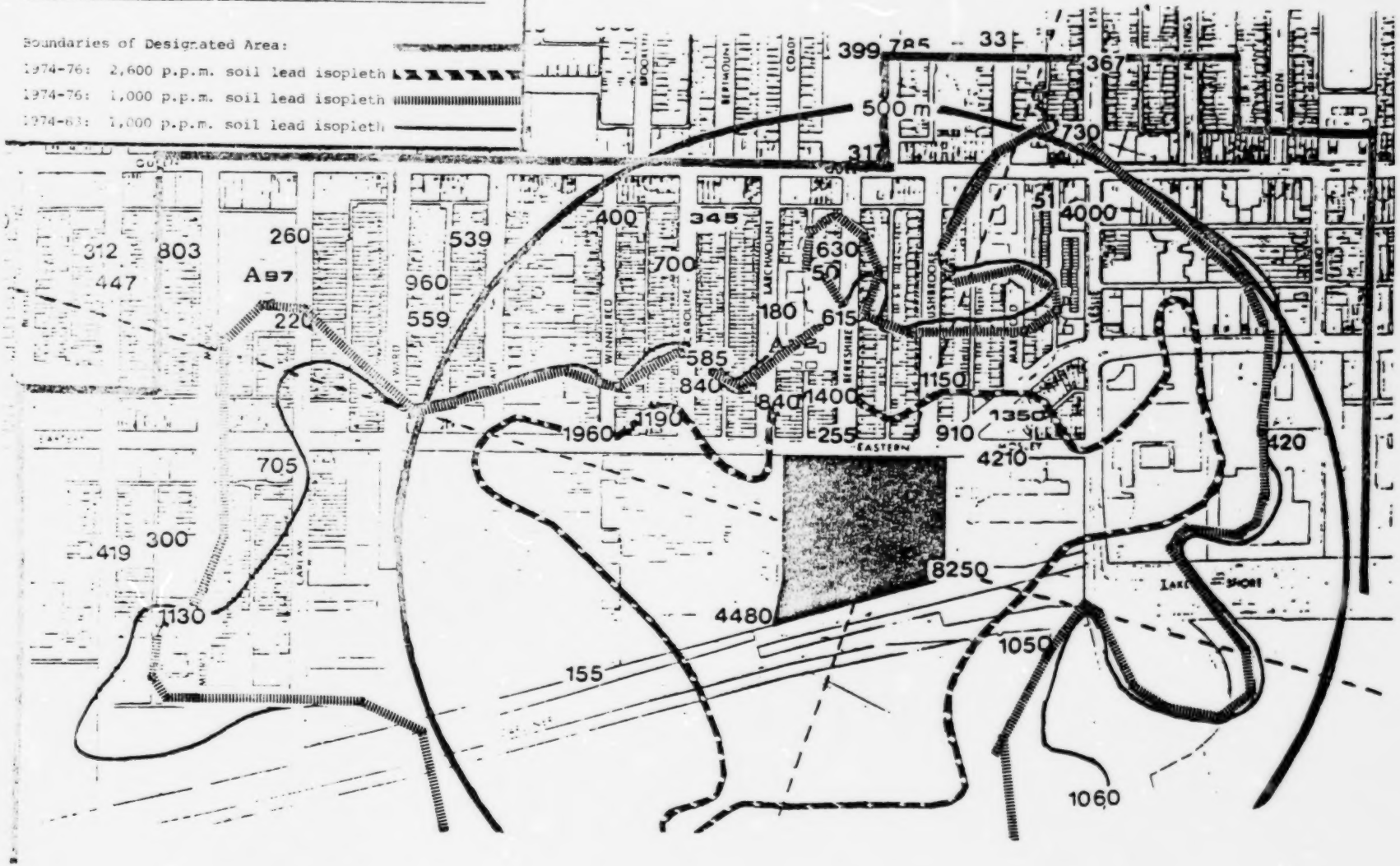
DESIGNATED HIGH RISK AREA FOR CHILDREN UNDER 6 YEARS

Boundaries of Designated Area:

1974-76: 2,600 p.p.m. soil lead isopleth

1974-76: 1,000 p.p.m. soil lead isopleth

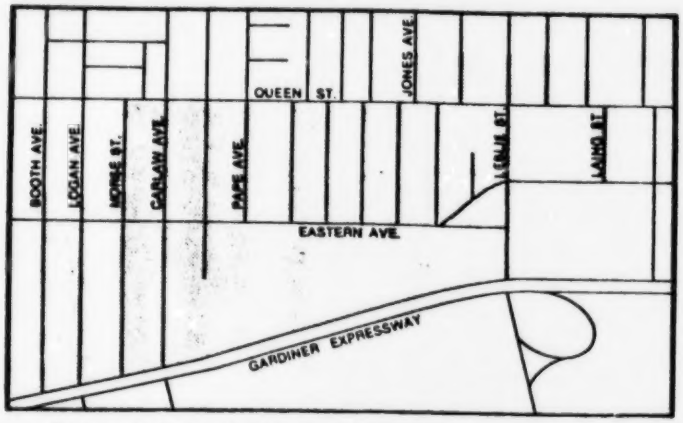
1974-83: 1,000 p.p.m. soil lead isopleth



# NOTICE

# BLOOD LEAD TESTING

**TO PARENTS OF INFANTS & YOUNG CHILDREN LIVING WITHIN THE SHADED AREA**




**Important health information. Please read.**
City of Toronto, Department of Public Health

**À lire: renseignements importants en matière de santé.**

Πληροφορίες μεγάλης σημασίας
γιά τήν ύγεία σας.
Παρακαλείστε νά τίς διαβάσετε.

請閱讀重要健康資料

Soil tests in the shaded area on the above map indicate high lead levels (frequently over 1,000 p.p.m.).

**CHILDREN 5 YEARS AND YOUNGER...**

- May have higher blood lead levels than older children. This may be due to their playing in the soil and putting things in their mouths.
- May be more susceptible to lead than older children because they are growing and developing very rapidly.

The Department of Public Health, Eastern Health Area, recommends that all children 5 years and under living in this shaded area have an annual blood test for lead.

This can be done either:

- By your own doctor. If this is your choice, please ask your doctor to read the letter on the back of this sheet and complete the form after testing

  OR

- By appointment only for our "Under 6" Lead Testing at Morse Public School, 180 Carlaw Avenue, Tuesday, October 4, 10 - 12 noon; 2 - 5 p.m.; Wednesday, October 5, 2 - 7 p.m.; Wednesday, October 12, 2 - 7 p.m.

Arrangements may be made for children under 6 years who are attending Bruce or St. Joseph's schools to be tested there.

The test is a simple skin prick done by a public health nurse or physician. The parent or guardian must sign a consent. The results of this test and advice will be sent to you.

**FOR AN APPOINTMENT OR FOR FURTHER INFORMATION, PLEASE CALL 469-0389.**

預約時間或需要更多資料,請電河谷務民婦女中心,電話: 465-4778.

Thank you very much for helping

Edward Ellis, M.D., M.P.H.

Dear Doctor:

In our mass lead screening programme of October 1982, we found that children 0 - 5 years of age had a mean blood lead level of 13.8 ug/dl, compared to a mean of 11.9 ug/dl for children 6 - 9 years of age.

The shaded area on the map overleaf has been designated as high risk for children aged 0 - 5, since soil lead levels frequently exceed 1,000 p.p.m., the level at which a significant positive epidemiologic correlation between soil lead and child blood lead begins. We are asking that all children aged 0 - 5 residing in the shaded area be tested annually for their blood lead. We suggest that blood specimens for lead analysis be sent to the Provincial Laboratory (Biochemistry) to assure comparability of the results. If the result is 20 ug/dl or over, public health staff will visit the home to discuss with the parents ways of reducing the child's exposure to lead.

Would you please complete this form for any child you examine and return it to the address below. If you have any questions or would like an information pamphlet on lead, please phone our area physician Dr. Jean Erb at 469-0554.

Thank you for your help.

Yours truly,

Edward Ellis

Edward Ellis, M.D., M.P.H.
Associate Medical Officer of Health

---

Name _____ Age _____ Sex _____

Address _____

Phone _____ Date of Examination _____

Results of Examination

Blood Lead _____ ug/dl Other Findings _____

_____

Please mail to: Dr. Jean Erb
Area Physician
315 Danforth Avenue
Toronto, Ontario
M4J 1L2

Physician's Name: _____

Address: _____

or Stamp: